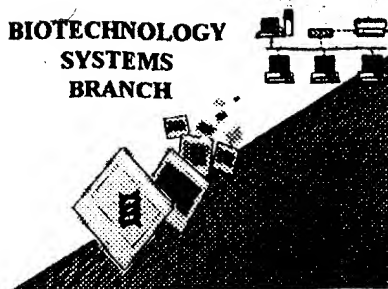


RAW SEQUENCE LISTING **ERROR REPORT**

BIOTECHNOLOGY
SYSTEMS
BRANCH



The Biotechnology Systems Branch of the Scientific and Technical Information Center (STIC) detected errors when processing the following computer readable form:

Application Serial Number: 09/756,071

Source: OIPF

Date Processed by STIC: 1/25/2001

BEST AVAILABLE COPY

THE ATTACHED PRINTOUT EXPLAINS DETECTED ERRORS.

PLEASE FORWARD THIS INFORMATION TO THE APPLICANT BY EITHER:

- 1) INCLUDING A COPY OF THIS PRINTOUT IN YOUR NEXT COMMUNICATION TO THE APPLICANT, WITH A NOTICE TO COMPLY or,**
- 2) TELEPHONING APPLICANT AND FAXING A COPY OF THIS PRINTOUT, WITH A NOTICE TO COMPLY**

FOR CRF SUBMISSION QUESTIONS, PLEASE CONTACT MARK SPENCER, 703-308-4212.

FOR SEQUENCE RULES INTERPRETATION, PLEASE CONTACT ROBERT WAX, 703-308-4216.

PATENTIN 2.1 e-mail help: patin21help@uspto.gov or phone 703-306-4119 (R. Wax)

PATENTIN 3.0 e-mail help: patin3help@uspto.gov or phone 703-306-4119 (R. Wax)

TO REDUCE ERRORED SEQUENCE LISTINGS, PLEASE USE THE CHECKER VERSION 3.0 PROGRAM, ACCESSIBLE THROUGH THE U.S. PATENT AND TRADEMARK OFFICE WEBSITE. SEE BELOW:

Checker Version 3.0

The Checker Version 3.0 application is a state-of-the-art Windows based software program employing a logical and intuitive user-interface to check whether a sequence listing is in compliance with format and content rules. Checker Version 3.0 works for sequence listings generated for the original version of 37 CFR §§1.821 – 1.825 effective October 1, 1990 (old rules) and the revised version (new rules) effective July 1, 1998 as well as World Intellectual Property Organization (WIPO) Standard ST.25.

Checker Version 3.0 replaces the previous DOS-based version of Checker, and is Y2K-compliant. Checker allows public users to check sequence listings in Computer Readable form (CRF) before submitting them to the United States Patent and Trademark Office (USPTO). Use of Checker prior to filing the sequence listing is expected to result in fewer errored sequence listings, thus saving time and money.

Checker Version 3.0 can be down loaded from the USPTO website at the following address:

<http://www.uspto.gov/web/offices/pac/checker>

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:43

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

Does Not Comply
Corrected Diskette Needed

SEQUENCE LISTING

3 (1) GENERAL INFORMATION:
 5 (i) APPLICANT: Tryggvason, Karl
 6 Kallunki, Pekka
 7 Pyke, Charles
 9 (ii) TITLE OF INVENTION: Laminin Chains: Diagnostic Uses
 11 (iii) NUMBER OF SEQUENCES: 20
 13 (iv) CORRESPONDENCE ADDRESS:
 14 (A) ADDRESSEE: Fay Sharpe Fagan Minnich & McKee
 15 (B) STREET: 1100 Superior Ave, Suite 700
 16 (C) CITY: Cleveland
 17 (D) STATE: Ohio
 18 (E) COUNTRY: USA
 19 (F) ZIP: 44114
 21 (v) COMPUTER READABLE FORM:
 22 (A) MEDIUM TYPE: Floppy disk
 23 (B) COMPUTER: IBM PC compatible
 24 (C) OPERATING SYSTEM: PC-DOS/MS-DOS
 25 (D) SOFTWARE: PatentIn Release #1.0, Version #1.30
 27 (vi) CURRENT APPLICATION DATA:
 28 (A) APPLICATION NUMBER: US/09/756,071
 29 (B) FILING DATE: 08-Jan-2001
 35 (C) CLASSIFICATION:
 32 (vii) PRIOR APPLICATION DATA:
 33 (A) APPLICATION NUMBER: US 09/663,147
 34 (B) FILING DATE: 150-September 2000
 37 (viii) ATTORNEY/AGENT INFORMATION:
 38 (A) NAME: Minnich, Richard, J.
 39 (B) REGISTRATION NUMBER: 24,175
 40 (C) REFERENCE/DOCKET NUMBER: TRV 20014
 42 (ix) TELECOMMUNICATION INFORMATION:
 43 (A) TELEPHONE: 216-861-5582
 44 (B) TELEFAX: 216-241-1666

see
pp 1,4,5,7,8

ERRORED SEQUENCES

604 (2) INFORMATION FOR SEQ ID NO: 13:
 606 (i) SEQUENCE CHARACTERISTICS:
 607 (A) LENGTH: 1194 amino acids → 1193 (p. 4)
 608 (B) TYPE: amino acid
 609 (D) TOPOLOGY: linear
 611 (ii) MOLECULE TYPE: protein
 613 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
 615 Met Pro Ala Leu Trp Leu Gly Cys Cys Leu Cys Phe Ser Leu Leu Leu
 616 1 5 10 15
 618 Pro Ala Ala Arg Ala Thr Ser Arg Arg Glu Val Cys Asp Cys Asn Gly

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

619          20          25          30
621 Lys Ser Arg Gln Cys Ile Phe Asp Arg Glu Leu His Arg Gln Thr Gly
622          35          40          45
624 Asn Gly Phe Arg Cys Leu Asn Cys Asn Asp Asn Thr Asp Gly Ile His
625          50          55          60
627 Cys Glu Lys Cys Lys Asn Gly Phe Tyr Arg His Arg Glu Arg Asp Arg
628 65          70          75          80
630 Cys Leu Pro Cys Asn Cys Asn Ser Lys Gly Ser Leu Ser Ala Arg Cys
631          85          90          95
633 Asp Asn Ser Gly Arg Cys Ser Cys Lys Pro Gly Val Thr Gly Ala Arg
634          100         105         110
636 Cys Asp Arg Cys Leu Pro Gly Phe His Met Leu Thr Asp Ala Gly Cys
637          115         120         125
639 Thr Gln Asp Gln Arg Leu Leu Asp Ser Lys Cys Asp Cys Asp Pro Ala
640          130         135         140
642 Gly Ile Ala Gly Pro Cys Asp Ala Gly Arg Cys Val Cys Lys Pro Ala
643 145          150         155         160
645 Val Thr Gly Glu Arg Cys Asp Arg Cys Arg Ser Gly Tyr Tyr Asn Leu
646          165         170         175
648 Asp Gly Gly Asn Pro Glu Gly Cys Thr Gln Cys Phe Cys Tyr Gly His
649          180         185         190
651 Ser Ala Ser Cys Arg Ser Ser Ala Glu Tyr Ser Val His Lys Ile Thr
652          195         200         205
654 Ser Thr Phe His Gln Asp Val Asp Gly Trp Lys Ala Val Gln Arg Asn
655          210         215         220
657 Gly Ser Pro Ala Lys Leu Gln Trp Ser Gln Arg His Gln Asp Val Phe
658 225          230         235         240
660 Ser Ser Ala Gln Arg Leu Asp Pro Val Tyr Phe Val Ala Pro Ala Lys
661          245         250         255
663 Phe Leu Gly Asn Gln Gln Val Ser Tyr Gly Gln Ser Leu Ser Phe Asp
664          260         265         270
666 Tyr Arg Val Asp Arg Gly Gly Arg His Pro Ser Ala His Asp Val Ile
667          275         280         285
669 Leu Glu Gly Ala Gly Leu Arg Ile Thr Ala Pro Leu Met Pro Leu Gly
670          290         295         300
672 Lys Thr Leu Pro Cys Gly Leu Thr Lys Thr Tyr Thr Phe Arg Leu Asn
673 305          310         315         320
675 Glu His Pro Ser Asn Asn Trp Ser Pro Gln Leu Ser Tyr Phe Glu Tyr
676          325         330         335
678 Arg Arg Leu Leu Arg Asn Leu Thr Ala Leu Arg Ile Arg Ala Thr Tyr
679          340         345         350
681 Gly Glu Tyr Ser Thr Gly Tyr Ile Asp Asn Val Thr Leu Ile Ser Ala
682          355         360         365
684 Arg Pro Val Ser Gly Ala Pro Ala Pro Trp Val Glu Gln Cys Ile Cys
685          370         375         380
687 Pro Val Gly Tyr Lys Gly Gln Phe Cys Gln Asp Cys Ala Ser Gly Tyr
688 385          390         395         400
690 Lys Arg Asp Ser Ala Arg Leu Gly Pro Phe Gly Thr Cys Ile Pro Cys
691          405         410         415

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

693 Asn Cys Gln Gly Gly Gly Ala Cys Asp Pro Asp Thr Gly Asp Cys Tyr
694                               420                               425                               430
696 Ser Gly Asp Glu Asn Pro Asp Ile Glu Cys Ala Asp Cys Pro Ile Gly
697                               435                               440                               445
699 Phe Tyr Asn Asp Pro His Asp Pro Arg Ser Cys Lys Pro Cys Pro Cys
700                               450                               455                               460
702 His Asn Gly Phe Ser Cys Ser Val Ile Pro Glu Thr Glu Glu Val Val
703 465                               470                               475                               480
705 Cys Asn Asn Cys Pro Pro Gly Val Thr Gly Ala Arg Cys Glu Leu Cys
706                               485                               490                               495
708 Ala Asp Gly Tyr Phe Gly Asp Pro Phe Gly Glu His Gly Pro Val Arg
709                               500                               505                               510
711 Pro Cys Gln Pro Cys Gln Cys Asn Ser Asn Val Asp Pro Ser Ala Ser
712                               515                               520                               525
714 Gly Asn Cys Asp Arg Leu Thr Gly Arg Cys Leu Lys Cys Ile His Asn
715                               530                               535                               540
717 Thr Ala Gly Ile Tyr Cys Asp Gln Cys Lys Ala Gly Tyr Phe Gly Asp
718 545                               550                               555                               560
720 Pro Leu Ala Pro Asn Pro Ala Asp Lys Cys Arg Ala Cys Asn Cys Asn
721                               565                               570                               575
723 Pro Met Gly Ser Glu Pro Val Gly Cys Arg Ser Asp Gly Thr Cys Val
724                               580                               585                               590
726 Cys Lys Pro Gly Phe Gly Gly Pro Asn Cys Glu His Gly Ala Phe Ser
727                               595                               600                               605
729 Cys Pro Ala Cys Tyr Asn Gln Val Lys Ile Gln Met Asp Gln Phe Met
730                               610                               615                               620
732 Gln Gln Leu Gln Arg Met Glu Ala Leu Ile Ser Lys Ala Gln Gly Gly
733 625                               630                               635                               640
735 Asp Gly Val Val Pro Asp Thr Glu Leu Glu Gly Arg Met Gln Gln Ala
736                               645                               650                               655
738 Glu Gln Ala Leu Gln Asp Ile Leu Arg Asp Ala Gln Ile Ser Glu Gly
739                               660                               665                               670
741 Ala Ser Arg Ser Leu Gly Leu Gln Leu Ala Lys Val Arg Ser Gln Glu
742                               675                               680                               685
744 Asn Ser Tyr Gln Ser Arg Leu Asp Asp Leu Lys Met Thr Val Glu Arg
745                               690                               695                               700
747 Val Arg Ala Leu Gly Ser Gln Tyr Gln Asn Arg Val Arg Asp Thr His
748 705                               710                               715                               720
750 Arg Leu Ile Thr Gln Met Gln Leu Ser Leu Ala Glu Ser Glu Ala Ser
751                               725                               730                               735
753 Leu Gly Asn Thr Asn Ile Pro Ala Ser Asp His Tyr Val Gly Pro Asn
754                               740                               745                               750
756 Gly Phe Lys Ser Leu Ala Gln Glu Ala Thr Arg Leu Ala Glu Ser His
757                               755                               760                               765
759 Val Glu Ser Ala Ser Asn Met Glu Gln Leu Thr Arg Glu Thr Glu Asp
760                               770                               775                               780
762 Tyr Ser Lys Gln Ala Leu Ser Leu Val Arg Lys Ala Leu His Glu Gly
763 785                               790                               795                               800
765 Val Gly Ser Gly Ser Gly Ser Pro Asp Gly Ala Val Val Gln Gly Leu

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

766          805          810          815
768 Val Glu Lys Leu Glu Lys Thr Lys Ser Leu Ala Gln Gln Leu Thr Arg
769          820          825          830
771 Glu Ala Thr Gln Ala Glu Ile Glu Ala Asp Arg Ser Tyr Gln His Ser
772          835          840          845
774 Leu Arg Leu Leu Asp Ser Val Ser Pro Leu Gln Gly Val Ser Asp Gln
775          850          855          860
777 Ser Phe Gln Val Glu Glu Ala Lys Arg Ile Lys Gln Lys Ala Asp Ser
778 865          870          875          880
780 Leu Ser Ser Leu Val Thr Arg His Met Asp Glu Phe Lys Arg Thr Gln
781          885          890          895
783 Lys Asn Leu Gly Asn Trp Lys Glu Glu Ala Gln Gln Leu Leu Gln Asn
784          900          905          910
786 Gly Lys Ser Gly Arg Glu Lys Ser Asp Gln Leu Leu Ser Arg Ala Asn
787          915          920          925
789 Leu Ala Lys Ser Arg Ala Gln Glu Ala Leu Ser Met Gly Asn Ala Thr
790          930          935          940
792 Phe Tyr Glu Val Glu Ser Ile Leu Lys Asn Leu Arg Glu Phe Asp Leu
793 945          950          955          960
795 Gln Val Asp Asn Arg Lys Ala Glu Ala Glu Glu Ala Met Lys Arg Leu
796          965          970          975
798 Ser Tyr Ile Ser Gln Lys Val Ser Asp Ala Ser Asp Lys Thr Gln Gln
799          980          985          990
801 Ala Glu Arg Ala Leu Gly Ser Ala Ala Ala Asp Ala Gln Arg Ala Lys
802          995          1000          1005
804 Asn Gly Ala Gly Glu Ala Leu Glu Ile Ser Ser Glu Ile Glu Gln Glu
805          1010          1015          1020
807 Ile Gly Ser Leu Asn Leu Glu Ala Asn Val Thr Ala Asp Gly Ala Leu
808 1025          1030          1035          1040
810 Ala Met Glu Lys Gly Leu Ala Ser Leu Lys Ser Glu Met Arg Glu Val
811          1045          1050          1055
813 Glu Gly Glu Leu Glu Arg Lys Glu Leu Glu Phe Asp Thr Asn Met Asp
814          1060          1065          1070
816 Ala Val Gln Met Val Ile Thr Glu Ala Gln Lys Val Asp Thr Arg Ala
817          1075          1080          1085
819 Lys Asn Ala Gly Val Thr Ile Gln Asp Thr Leu Asn Thr Leu Asp Gly
820          1090          1095          1100
822 Leu Leu His Leu Met Asp Gln Pro Leu Ser Val Asp Glu Glu Gly Leu
823 1105          1110          1115          1120
825 Val Leu Leu Glu Gln Lys Leu Ser Arg Ala Lys Thr Gln Ile Asn Ser
826          1125          1130          1135
828 Gln Leu Arg Pro Met Met Ser Glu Leu Glu Glu Arg Ala Arg Gln Gln
829          1140          1145          1150
831 Arg Gly His Leu His Leu Leu Glu Thr Ser Ile Asp Gly Ile Leu Ala
832          1155          1160          1165
834 Asp Val Lys Asn Leu Glu Asn Ile Arg Asp Asn Leu Pro Pro Gly Cys
835          1170          1175          1180
E--> 837 Tyr Asn Thr Gln Ala Leu Glu Gln Gln (*)
838 1185          1190

```

*delete ending stop codon
and adjust (A) LENGTH: response*

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

1185 (2) INFORMATION FOR SEQ ID NO: 15:

1187 (i) SEQUENCE CHARACTERISTICS:

1188 (A) LENGTH: 1112 amino acids

1189 (B) TYPE: amino acid

1190 (D) TOPOLOGY: linear

1192 (ii) MOLECULE TYPE: protein

1194 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:

1196 Met Pro Ala Leu Trp Leu Gly Cys Cys Leu Cys Phe Ser Leu Leu Leu
1197 1 5 10 15
1199 Pro Ala Ala Arg Ala Thr Ser Arg Arg Glu Val Cys Asp Cys Asn Gly
1200 20 25 30
1202 Lys Ser Arg Gln Cys Ile Phe Asp Arg Glu Leu His Arg Gln Thr Gly
1203 35 40 45
1205 Asn Gly Phe Arg Cys Leu Asn Cys Asn Asp Asn Thr Asp Gly Ile His
1206 50 55 60
1208 Cys Glu Lys Cys Lys Asn Gly Phe Tyr Arg His Arg Glu Arg Asp Arg
1209 65 70 75 80
1211 Cys Leu Pro Cys Asn Cys Asn Ser Lys Gly Ser Leu Ser Ala Arg Cys
1212 85 90 95
1214 Asp Asn Ser Gly Arg Cys Ser Cys Lys Pro Gly Val Thr Gly Ala Arg
1215 100 105 110
1217 Cys Asp Arg Cys Leu Pro Gly Phe His Met Leu Thr Asp Ala Gly Cys
1218 115 120 125
1220 Thr Gln Asp Gln Arg Leu Leu Asp Ser Lys Cys Asp Cys Asp Pro Ala
1221 130 135 140
1223 Gly Ile Ala Gly Pro Cys Asp Ala Gly Arg Cys Val Cys Lys Pro Ala
1224 145 150 155 160
1226 Val Thr Gly Glu Arg Cys Asp Arg Cys Arg Ser Gly Tyr Tyr Asn Leu
1227 165 170 175
1229 Asp Gly Gly Asn Pro Glu Gly Cys Thr Gln Cys Phe Cys Tyr Gly His
1230 180 185 190
1232 Ser Ala Ser Cys Arg Ser Ser Ala Glu Tyr Ser Val His Lys Ile Thr
1233 195 200 205
1235 Ser Thr Phe His Gln Asp Val Asp Gly Trp Lys Ala Val Gln Arg Asn
1236 210 215 220
1238 Gly Ser Pro Ala Lys Leu Gln Trp Ser Gln Arg His Gln Asp Val Phe
1239 225 230 235 240
1241 Ser Ser Ala Gln Arg Leu Asp Pro Val Tyr Phe Val Ala Pro Ala Lys
1242 245 250 255
1244 Phe Leu Gly Asn Gln Gln Val Ser Tyr Gly Gln Ser Leu Ser Phe Asp
1245 260 265 270
1247 Tyr Arg Val Asp Arg Gly Gly Arg His Pro Ser Ala His Asp Val Ile
1248 275 280 285
1250 Leu Glu Gly Ala Gly Leu Arg Ile Thr Ala Pro Leu Met Pro Leu Gly
1251 290 295 300
1253 Lys Thr Leu Pro Cys Gly Leu Thr Lys Thr Tyr Thr Phe Arg Leu Asn
1254 305 310 315 320
1256 Glu His Pro Ser Asn Asn Trp Ser Pro Gln Leu Ser Tyr Phe Glu Tyr
1257 325 330 335

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

1259 Arg Arg Leu Leu Arg Asn Leu Thr Ala Leu Arg Ile Arg Ala Thr Tyr
1260          340          345          350
1262 Gly Glu Tyr Ser Thr Gly Tyr Ile Asp Asn Val Thr Leu Ile Ser Ala
1263          355          360          365
1265 Arg Pro Val Ser Gly Ala Pro Ala Pro Trp Val Glu Gln Cys Ile Cys
1266          370          375          380
1268 Pro Val Gly Tyr Lys Gly Gln Phe Cys Gln Asp Cys Ala Ser Gly Tyr
1269 385          390          395          400
1271 Lys Arg Asp Ser Ala Arg Leu Gly Pro Phe Gly Thr Cys Ile Pro Cys
1272          405          410          415
1274 Asn Cys Gln Gly Gly Gly Ala Cys Asp Pro Asp Thr Gly Asp Cys Tyr
1275          420          425          430
1277 Ser Gly Asp Glu Asn Pro Asp Ile Glu Cys Ala Asp Cys Pro Ile Gly
1278          435          440          445
1280 Phe Tyr Asn Asp Pro His Asp Pro Arg Ser Cys Lys Pro Cys Pro Cys
1281          450          455          460
1283 His Asn Gly Phe Ser Cys Ser Val Ile Pro Glu Thr Glu Glu Val Val
1284 465          470          475          480
1286 Cys Asn Asn Cys Pro Pro Gly Val Thr Gly Ala Arg Cys Glu Leu Cys
1287          485          490          495
1289 Ala Asp Gly Tyr Phe Gly Asp Pro Phe Gly Glu His Gly Pro Val Arg
1290          500          505          510
1292 Pro Cys Gln Pro Cys Gln Cys Asn Ser Asn Val Asp Pro Ser Ala Ser
1293          515          520          525
1295 Gly Asn Cys Asp Arg Leu Thr Gly Arg Cys Leu Lys Cys Ile His Asn
1296          530          535          540
1298 Thr Ala Gly Ile Tyr Cys Asp Gln Cys Lys Ala Gly Tyr Phe Gly Asp
1299 545          550          555          560
1301 Pro Leu Ala Pro Asn Pro Ala Asp Lys Cys Arg Ala Cys Asn Cys Asn
1302          565          570          575
1304 Pro Met Gly Ser Glu Pro Val Gly Cys Arg Ser Asp Gly Thr Cys Val
1305          580          585          590
1307 Cys Lys Pro Gly Phe Gly Gly Pro Asn Cys Glu His Gly Ala Phe Ser
1308          595          600          605
1310 Cys Pro Ala Cys Tyr Asn Gln Val Lys Ile Gln Met Asp Gln Phe Met
1311          610          615          620
1313 Gln Gln Leu Gln Arg Met Glu Ala Leu Ile Ser Lys Ala Gln Gly Gly
1314 625          630          635          640
1316 Asp Gly Val Val Pro Asp Thr Glu Leu Glu Gly Arg Met Gln Gln Ala
1317          645          650          655
1319 Glu Gln Ala Leu Gln Asp Ile Leu Arg Asp Ala Gln Ile Ser Glu Gly
1320          660          665          670
1322 Ala Ser Arg Ser Leu Gly Leu Gln Leu Ala Lys Val Arg Ser Gln Glu
1323          675          680          685
1325 Asn Ser Tyr Gln Ser Arg Leu Asp Asp Leu Lys Met Thr Val Glu Arg
1326          690          695          700
1328 Val Arg Ala Leu Gly Ser Gln Tyr Gln Asn Arg Val Arg Asp Thr His
1329 705          710          715          720
1331 Arg Leu Ile Thr Gln Met Gln Leu Ser Leu Ala Glu Ser Glu Ala Ser

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

1332          725          730          735
1334 Leu Gly Asn Thr Asn Ile Pro Ala Ser Asp His Tyr Val Gly Pro Asn
1335          740          745          750
1337 Gly Phe Lys Ser Leu Ala Gln Glu Ala Thr Arg Leu Ala Glu Ser His
1338          755          760          765
1340 Val Glu Ser Ala Ser Asn Met Glu Gln Leu Thr Arg Glu Thr Glu Asp
1341          770          775          780
1343 Tyr Ser Lys Gln Ala Leu Ser Leu Val Arg Lys Ala Leu His Glu Gly
1344 785          790          795          800
1346 Val Gly Ser Gly Ser Gly Ser Pro Asp Gly Ala Val Val Gln Gly Leu
1347          805          810          815
1349 Val Glu Lys Leu Glu Lys Thr Lys Ser Leu Ala Gln Gln Leu Thr Arg
1350          820          825          830
1352 Glu Ala Thr Gln Ala Glu Ile Glu Ala Asp Arg Ser Tyr Gln His Ser
1353          835          840          845
1355 Leu Arg Leu Leu Asp Ser Val Ser Pro Leu Gln Gly Val Ser Asp Gln
1356          850          855          860
1358 Ser Phe Gln Val Glu Glu Ala Lys Arg Ile Lys Gln Lys Ala Asp Ser
1359 865          870          875          880
1361 Leu Ser Ser Leu Val Thr Arg His Met Asp Glu Phe Lys Arg Thr Gln
1362          885          890          895
1364 Lys Asn Leu Gly Asn Trp Lys Glu Glu Ala Gln Gln Leu Leu Gln Asn
1365          900          905          910
1367 Gly Lys Ser Gly Arg Glu Lys Ser Asp Gln Leu Leu Ser Arg Ala Asn
1368          915          920          925
1370 Leu Ala Lys Ser Arg Ala Gln Glu Ala Leu Ser Met Gly Asn Ala Thr
1371          930          935          940
1373 Phe Tyr Glu Val Glu Ser Ile Leu Lys Asn Leu Arg Glu Phe Asp Leu
1374 945          950          955          960
1376 Gln Val Asp Asn Arg Lys Ala Glu Ala Glu Glu Ala Met Lys Arg Leu
1377          965          970          975
1379 Ser Tyr Ile Ser Gln Lys Val Ser Asp Ala Ser Asp Lys Thr Gln Gln
1380          980          985          990
1382 Ala Glu Arg Ala Leu Gly Ser Ala Ala Asp Ala Gln Arg Ala Lys
1383          995          1000          1005
1385 Asn Gly Ala Gly Glu Ala Leu Glu Ile Ser Ser Glu Ile Glu Gln Glu
1386          1010          1015          1020
1388 Ile Gly Ser Leu Asn Leu Glu Ala Asn Val Thr Ala Asp Gly Ala Leu
1389 1025          1030          1035          1040
1391 Ala Met Glu Lys Gly Leu Ala Ser Leu Lys Ser Glu Met Arg Glu Val
1392          1045          1050          1055
1394 Glu Gly Glu Leu Glu Arg Lys Glu Leu Glu Phe Asp Thr Asn Met Asp
1395          1060          1065          1070
1397 Ala Val Gln Met Val Ile Thr Glu Ala Gln Lys Val Asp Thr Arg Ala
1398          1075          1080          1085
1400 Lys Asn Ala Gly Val Thr Ile Gln Asp Thr Leu Asn Thr Leu Asp Gly
1401          1090          1095          1100
E--> 1403 Leu Leu His Leu Met Gly Met (*)
1404 1105          1110

```


RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

1472 (2) INFORMATION FOR SEQ ID NO: 20:

1474 (i) SEQUENCE CHARACTERISTICS:

1475 (A) LENGTH: 720 ~~base pairs~~1476 (B) TYPE: nucleic acid → amino acid →

1477 (C) STRANDEDNESS: single

1478 (D) TOPOLOGY: linear

1480 (ii) MOLECULE TYPE: other nucleic acid →

1481 (A) DESCRIPTION: /desc = "OLIGOMER PRIMER"

1483 (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 20:

1485 Ala Gly Thr Cys Thr Thr Thr Ala Thr Ala Gly Gly Gly Ala Gly Gly
1486 1 5 10 15
1488 Thr Thr Gly Gly Cys Cys Ala Gly Thr Cys Ala Ala Thr Ala Gly Gly
1489 20 25 30
1491 Thr Thr Ala Cys Thr Thr Thr Ala Thr Gly Ala Gly Thr Thr Gly Cys
1492 35 40 45
1494 Thr Ala Ala Cys Cys Cys Thr Gly Gly Thr Gly Ala Gly Cys Ala Gly
1495 50 55 60
1497 Gly Ala Ala Gly Thr Thr Ala Thr Gly Thr Gly Gly Ala Cys Cys Ala
1498 65 70 75 80
1500 Gly Gly Ala Gly Ala Gly Ala Ala Ala Cys Cys Cys Thr Thr Gly Gly
1501 85 90 95
1503 Thr Thr Cys Ala Gly Cys Cys Thr Gly Gly Ala Gly Ala Ala Ala Gly
1504 100 105 110
1506 Gly Ala Gly Ala Gly Gly Thr Thr Gly Ala Cys Cys Cys Thr Ala Ala
1507 115 120 125
1509 Ala Cys Thr Gly Gly Ala Gly Gly Gly Thr Gly Gly Ala Gly Ala Gly
1510 130 135 140
1512 Gly Ala Cys Cys Cys Thr Gly Thr Thr Gly Thr Gly Ala Cys Thr Cys
1513 145 150 155 160
1515 Thr Cys Cys Gly Ala Cys Thr Gly Ala Cys Thr Thr Gly Thr Cys Thr
1516 165 170 175
1518 Thr Cys Cys Thr Thr Gly Ala Thr Gly Thr Cys Cys Thr Thr Thr Ala
1519 180 185 190
1521 Ala Gly Cys Cys Gly Gly Ala Gly Cys Thr Gly Ala Thr Thr Cys Gly
1522 195 200 205
1524 Gly Gly Cys Thr Gly Cys Thr Gly Cys Cys Thr Thr Ala Thr Thr Thr
1525 210 215 220
1527 Cys Thr Gly Ala Gly Thr Thr Ala Gly Cys Gly Cys Thr Cys Thr Thr
1528 225 230 235 240
1530 Ala Ala Gly Ala Thr Thr Gly Gly Gly Cys Cys Thr Cys Cys Cys Ala
1531 245 250 255
1533 Gly Thr Thr Thr Gly Ala Gly Gly Ala Ala Gly Gly Gly Gly Cys Gly
1534 260 265 270
1536 Gly Gly Cys Thr Gly Cys Thr Gly Thr Cys Thr Ala Cys Cys Thr Cys
1537 275 280 285
1539 Thr Gly Thr Gly Ala Ala Thr Cys Thr Gly Cys Cys Cys Thr Gly Gly
1540 290 295 300
1542 Ala Cys Cys Ala Cys Cys Cys Cys Gly Gly Gly Ala Gly Ala Gly Ala
1543 305 310 315 320

*This is not
a nucleotide
sequence.*

RAW SEQUENCE LISTING

DATE: 01/25/2001

PATENT APPLICATION: US/09/756,071

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

```

1545 Ala Gly Gly Ala Gly Gly Gly Cys Thr Cys Cys Gly Gly Gly Ala
1546          325          330          335
1548 Ala Thr Cys Thr Cys Gly Cys Ala Cys Ala Thr Thr Cys Cys Ala Gly
1549          340          345          350
1551 Gly Cys Ala Ala Ala Gly Gly Cys Thr Cys Cys Cys Gly Gly Gly Cys
1552          355          360          365
1554 Cys Gly Cys Ala Gly Cys Cys Thr Cys Thr Gly Thr Gly Cys Cys Ala
1555          370          375          380
1557 Cys Ala Cys Cys Cys Thr Thr Gly Gly Cys Cys Cys Gly Gly Gly Cys
1558 385          390          395          400
1560 Cys Ala Gly Gly Thr Gly Thr Gly Cys Gly Cys Cys Cys Thr Cys Cys
1561          405          410          415
1563 Thr Cys Gly Cys Thr Gly Cys Gly Ala Gly Gly Gly Gly Gly Ala Gly
1564          420          425          430
1566 Cys Gly Gly Gly Cys Gly Gly Cys Thr Gly Cys Gly Gly Gly Gly Ala
1567          435          440          445
1569 Gly Cys Gly Ala Thr Thr Thr Thr Cys Cys Ala Gly Cys Cys Cys Gly
1570          450          455          460
1572 Gly Thr Thr Thr Gly Thr Gly Cys Thr Cys Thr Gly Thr Gly Thr Gly
1573 465          470          475          480
1575 Thr Thr Thr Gly Thr Cys Thr Gly Cys Cys Thr Cys Thr Gly Gly Ala
1576          485          490          495
1578 Gly Gly Gly Cys Thr Gly Gly Gly Thr Cys Cys Thr Cys Cys Thr Thr
1579          500          505          510
1581 Ala Thr Thr Cys Ala Cys Ala Gly Gly Thr Gly Ala Gly Thr Cys Ala
1582          515          520          525
1584 Cys Ala Cys Cys Cys Thr Gly Ala Ala Ala Cys Ala Cys Ala Gly Gly
1585          530          535          540
1587 Cys Thr Cys Thr Cys Thr Thr Cys Cys Thr Gly Thr Cys Ala Gly Gly
1588 545          550          555          560
1590 Ala Cys Thr Gly Ala Gly Thr Cys Ala Gly Gly Thr Ala Gly Ala Ala
1591          565          570          575
1593 Gly Ala Gly Thr Cys Gly Ala Thr Ala Ala Ala Ala Cys Cys Ala Cys
1594          580          585          590
1596 Cys Thr Gly Ala Thr Cys Ala Ala Gly Gly Ala Ala Ala Ala Gly Gly
1597          595          600          605
1599 Ala Ala Gly Gly Cys Ala Cys Ala Gly Cys Gly Gly Ala Gly Cys Gly
1600          610          615          620
1602 Cys Ala Gly Ala Gly Thr Gly Ala Gly Ala Ala Cys Cys Ala Cys Cys
1603 625          630          635          640
1605 Ala Ala Cys Cys Gly Ala Gly Gly Cys Gly Cys Cys Gly Gly Gly Cys
1606          645          650          655
1608 Ala Gly Cys Gly Ala Cys Cys Cys Cys Thr Gly Cys Ala Gly Cys Gly
1609          660          665          670
1611 Gly Ala Gly Ala Cys Ala Gly Ala Gly Ala Cys Thr Gly Ala Gly Cys
1612          675          680          685
1614 Gly Gly Cys Cys Cys Gly Gly Cys Ala Cys Cys Gly Cys Cys Ala Thr
1615          690          695          700
1617 Gly Cys Cys Thr Gly Cys Gly Cys Thr Cys Thr Gly Gly Cys Thr Gly

```

RAW SEQUENCE LISTING

DATE: 01/25/2001

PATENT APPLICATION: US/09/756,071

TIME: 11:31:44

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

E--> 1618 705

710

715

720

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/756,071

DATE: 01/25/2001

TIME: 11:31:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]
L:837 M:342 E: Invalid Stop Code On Error, STOP CODON:*
L:878 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:882 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:886 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:890 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:894 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:898 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:902 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:906 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:910 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:914 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:918 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:922 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:926 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:930 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:934 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:938 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:942 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:946 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:950 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:954 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:958 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:962 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:966 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:970 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:974 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:978 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:982 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:986 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:990 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:994 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:998 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1002 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1006 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1010 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1014 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1018 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1022 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1026 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1030 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1034 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1038 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1042 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1046 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1050 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1054 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14

VERIFICATION SUMMARY

DATE: 01/25/2001

PATENT APPLICATION: US/09/756,071

TIME: 11:31:45

Input Set : A:\ES.txt

Output Set: N:\CRF3\01252001\I756071.raw

L:1058 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1062 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1066 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1070 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1074 M:336 W: Invalid Amino Acid Number in Coding Region, SEQ ID:14
L:1403 M:342 E: Invalid Stop Code On Error, STOP CODON:*
L:1618 M:204 E: No. of Bases differ, LENGTH:Input:720 Counted:0 SEQ:20